

学校编码：10384

分类号_____密级_____

学号：27720131154607

UDC

厦 门 大 学

硕 士 学 位 论 文

IPO 地点是否影响募股的成绩程度？

**Does it matter where to list? A study on
location factor in success of Initial Public
Offerings**

Andrey Korotkov

指导教师姓名： Brett Graham

专业名称： 金 融 学

论文提交日期： 2015 年 3 月

论文答辩日期： 2015 年 5 月

学位授予日期： 2015 年 月

答辩委员会主席：

评 阅 人：

2015年3月

厦门大学学位论文原创性声明

本人呈交的学位论文是本人在导师指导下,独立完成的研究成果。本人在论文写作中参考其他个人或集体已经发表的研究成果,均在文中以适当方式明确标明,并符合法律规范和《厦门大学研究生学术活动规范(试行)》。

另外,该学位论文为()课题(组)的研究成果,获得()课题(组)经费或实验室的资助,在()实验室完成。(请在以上括号内填写课题或课题组负责人或实验室名称,未有此项声明内容的,可以不作特别声明。)

声明人(签名):

年 月 日

厦门大学学位论文著作权使用声明

本人同意厦门大学根据《中华人民共和国学位条例暂行实施办法》等规定保留和使用此学位论文，并向主管部门或其指定机构送交学位论文（包括纸质版和电子版），允许学位论文进入厦门大学图书馆及其数据库被查阅、借阅。本人同意厦门大学将学位论文加入全国博士、硕士学位论文共建单位数据库进行检索，将学位论文的标题和摘要汇编出版，采用影印、缩印或者其它方式合理复制学位论文。

本学位论文属于：

1. 经厦门大学保密委员会审查核定的保密学位论文，
于 年 月 日解密，解密后适用上述授权。

2. 不保密，适用上述授权。

（请在以上相应括号内打“√”或填上相应内容。保密学位论文应是已经厦门大学保密委员会审定过的学位论文，未经厦门大学保密委员会审定的学位论文均为公开学位论文。此声明栏不填写的，默认为公开学位论文，均适用上述授权。）

声明人（签名）：

年 月 日

摘要

这篇论文通过研究 2009—2013 年在香港、马来西亚和新加坡进行首次公开募股（IPO）的样本股票，分析 IPO 地点对股票发行者观察到的 IPO 成功程度的作用及影响。我们分别比较了这三地的境内公司的股票上市表现和境外公司股票上市表现。其中一种评估方法发现，境外上市股票中，在马来西亚进行 IPO 的表现最差，而另一种评估方法则表明在马来西亚进行 IPO 的境内上市股票表现好于那些在新加坡进行 IPO 的境内上市股票。对这六个类别（三个 IPO 地点以及境内外区别）进行比较的其他结果都不显著，因此我们得出 IPO 地点对于 IPO 成功程度具有边际显著性作用这一一般性结论。

关键词：IPO 表现； 资本市场； 市场效率

厦门大学博硕士

Abstract

This paper examines the role of location in degree of success of Initial Public Offerings as perceived by the issuer of stock on a sample of IPOs that took place in Hong Kong, Malaysia and Singapore from 2009 to 2013. We separately compare local and foreign listings on these three exchanges and, according to one evaluation approach, find that foreign listings in Malaysia perform worse than those in Hong Kong and Singapore, whereas based on another approach local listings in Malaysia perform better than those in Singapore. All other possible comparisons between these six categories (three locations and local/foreign distinction) of IPOs in the sample yield statistically insignificant results, which prompt us to make a general conclusion about the marginal significance of location factor in an IPO's success.

Key Words: IPO performance; Capital markets; Market efficiency

Contents

Introduction	1
1. Literature review	2
2. Existing models and our methodology.....	4
3. Data description.....	9
4. Regression models and coefficients.....	12
5. Hypothesis testing and results.....	15
6. Conclusions and discussion.....	17
References	19
Appendix I.....	22
Appendix II.....	23

Introduction

In recent years even people unrelated to matters of corporate finance have become increasingly aware of big IPO events, as many internationally renowned companies scared away from capital markets by the 2008 events return to consider their options. Facebook to Prada to AirAsia, every month there are big firms that make their transition from privately held enterprises to publicly traded companies – and this transformation is accomplished with different degrees of success.

One of the first questions a company's owner needs to answer after deciding to get its stock listed is "where?", since every exchange in the world has its own set of requirements and procedures that may be found unacceptable by a certain issuer or demand time to get through. The most recent example is the IPO by a Chinese Internet giant "Alibaba" that took place last September. Initially the company planned to list in Hong Kong, but the local "one share – one vote" principle would not allow the company's founder to retain control despite owning a minority of shares. The location was thus changed to New York where issuance of multiple classes of stocks with unequal voting rights is a common practice.

But apart from special cases like this one, putting aside regulatory differences, should one invest a lot of efforts into considerations of where to float? Of course, one would not want to offer stocks where there is no demand for them, but choosing between big IPO markets, such as those of Southeast Asia, will a particular location, be it Singapore, Malaysia or Hong Kong, have a significant effect on the prospects of an IPO?

There are multiple factors that come to mind ahead of bourse location when considering what can affect a listing: the company's prospects and history, situation within the industry, quality of management, public sentiment, brand strength and so on. So why would location be of any importance, theoretically?

Some argue that a developed pension fund system (like one in Malaysia) is needed to ensure the liquidity of a new stock, as pension funds are active in purchasing equity-related financial products, others believe that the presence of large hedge funds and broad international community of fund managers is required to allow for the rapid global distribution of the new stock (virtues of Singapore and Hong Kong). With this said the purpose of this paper is easy to formulate: it is to measure the weight of location factor in IPO success, and, being aware of the possible limitations in external validity related to the sample selection, try and answer the following question:

Does it matter where to list?

1. Literature review

This study is aimed at determining whether a choice of a particular exchange (listing location) affects how successful an IPO is, and whether this effect is statistically significant across different possible settings.

The question technically belongs to the vast and much researched field of IPO performance, however, as we show later in our work, this formulation of the problem is not typical for previous studies and the research will thus follow a different approach.

First studies of the subject date back to 1970s when researchers primarily investigated returns on newly issued stocks as opposed to returns on the “old” ones, comparable by industry and business scale, to determine whether the former have an advantage in terms of price behavior (see Stoll and Curley, 1970; Ibbotson, 1975). The studies generally documented that in most cases initial returns on new stock greatly surpass those of old ones, partly due to an “opening pop” – a sharp increase in stock price typically occurring in the first day of floating.

Evolving on these studies, in 1980s there was a big amount of works expanding on what has become known as the “underpricing phenomenon”. The big positive difference between subscription price and price on secondary market suggests that an issue is underpriced. Since that was (and still is) a universally observed phenomena, researchers tried to understand which factors affected the pricing and how does the magnitude of the pop change in different settings. (Ritter, 1984; 1987; Miller and Reilly 1987; Tinic 1988).

In the late 80s- early 90s several researchers drew public’s attention to the long-run performance of IPOs, suggesting that, contrastingly to short-run, new stocks tend to underperform comparable securities and thus to be initially overpriced despite the market’s incipient enthusiasm (see Stern and Bornstein, 1985; Ritter, 1991; Loughran and Ritter, 1995).

The end of 90s became the period of the hottest IPO market in history and sparked new interest among the academic community as to the factors influencing stock returns, including industry differences, role of underwriters, price support, etc. (Brav and Gompers, 1996; Carter, Dark and Singh, 1998). The tendency continued in the 21st century with researchers trying to improve the accuracy of their findings by using better data samples, devising new hypothesis and finding new proxies for factors affecting IPO returns.

Whereas there are many papers devoted to the effect of underwriter’s reputation, market “temperature” at the moment of the offering and other possible influencing factors, we found very few works investigating the effect of the listing location. Moreover, in those papers we did find,

researchers only compare the US exchanges (NASDAQ and NYSE) and how moving from one to another can affect a certain company's stock price (see Kadlec and McConnell, 1994; Jain and Kim 2006). We did not manage to find any works comparing a broader range of locations in terms of IPO performance, which in our mind would strongly improve robustness of results.

Besides, the very notion of "IPO success" is not broadly used in academic papers dealing with the subject. Instead, the researchers concentrate their attention on "IPO performance" which only investigates stock price behavior after the listing. Thus, these researches look at IPOs prospects from the point of view of those market participants who *acquire* the stock, and not those who sell it. That is why the famous conclusion to the fundamental long-run IPO performance research by Loughran and Ritter goes as follows: "Investing in firms issuing stock is hazardous to your wealth" (1995).

Unlike "IPO performance", the topic of "IPO success" would be dealing with factors that make a successful IPO from the issuer's point of view. Given typically significant insider retention, stock price movement after the offering should definitely be included into the measurement, but should not be the lone criteria.

Among the few works that investigate IPOs from this angle are papers on strategic management of pre-IPO companies (see Stuart et al., 1999; Gulati, Higgins, 2003). In this paper we are going to modify their approach and build our own measure of IPO success, further described in the methodology section.

Apart from that, the novelty of this work consists in comparing IPOs from a much broader range of locations than it was done before and for the first time, as far as we know, this subject is taken outside the boundaries of the US stock market – we are looking at three different exchanges in Southeast Asia over a period of five years. The ultimate result of research efforts in this direction would be a creation of a prediction model that would enable a company to make an informed and statistically backed decision on its listing location, given it considers going public in one of major exchanges of Southeast Asia.

The remainder of this paper is organized as follows. In section 2 we expand on selected works from the pool of existing literature and describe our methodology for this research. Section 3 describes our data and provides descriptive statistics for our sample. Our regression models and coefficients are presented in section 4, our hypotheses are tested in section 5, whereas section 6 concludes the paper with a summary and a discussion of our findings.

2. Existing models and our methodology

In order to compare different cases of stock issuance we needed a measure for how successful they happened to be. Having found a big number of works dedicated to “IPO performance” in the pool of previous studies, we were feeling certain about coming across such a measure in one of them, only to find out that majority of these papers only dealt with *price behavior of IPO stocks* (see Ritter 1991, Carter et al 1998, Dong et al 2011, Moore et al 2012). In other words, existing literature mostly performs an analysis for the buyers of shares, understanding “IPO performance” as the magnitude of returns on these stocks.

In this paper, however, we are looking at IPO success from the issuer’s point of view, trying to understand whether location factor plays a role in reaching the company’s goals associated with going public. A paper by Stuart, Hoang and Hybels (1999), one of the few works investigating IPOs from this perspective and dealing with the notion of “IPO success”, employs *pre-money* market valuation as its main indicator. The valuation is calculated as follows:

$$V^* = (p_u q_t - p_u q_i)$$

where p_u is the offer price as stated in the IPO prospectus, q_t is the number of shares outstanding, and q_i is the number of shares offered. Effectively, this means subtracting the amount of capital the company plans to raise from its market capitalization (based on the offer price), with V^* supposedly reflecting the market assessment of the company’s value right before the offering.

A more recent paper by Gulati and Higgins (2003) builds on this approach, adding *90 days* and *180 days* market valuations, where p_u , instead of the offering price, represents market price for the shares at 90 days and 180 days after the IPO, thus gauging the developing reaction of the market. Apart from that, Gulati and Higgins also add *net proceeds* (NP), which is the amount of capital raised less the IPO expenses. The four measures (V^* , V_{90} , V_{180} , NP) are then standardized and a mean of these four values is taken in every case to produce a single consolidated measure for an IPO success (hereafter “GH evaluation”).

Having examined this method, we came to a conclusion that it leaves room for criticism. E.g. according to the formula, the bigger share of a company is sold in the IPO, the smaller become the measures V^* , V_{90} and V_{180} , which would mean that an owner selling 100% of his company would get a very low mark on the scale no matter how well the IPO objectives are met. Moreover, the market price recorded on a single day may not reflect the true attitude by the market, but may be a short-lived sentiment caused by generally bad news or a previous day correction. On the other hand, the fourth measure, NP, only shows the amount of raised capital, implying that companies

selling more shares relative to their total shares number (and bigger companies in general) will invariably score higher on this parameter than those smaller and/or choosing higher share retention, whereas it is entirely possible that the latter perform their offerings in a more satisfying way.

It should be noted, however, that both papers mentioned here used the method on a sample of the US biotechnology firms, for which it is typical to follow an industry-specific pattern when deciding on a share of company to be sold. Apart from that, these type of firms do not usually have much physical assets prior to going public (Stuart et al, 1999) and thus are also more homogenous in terms of size than any sample of IPO firms from a broader selection of industries and economies.

Having considered the above issues, we decided to create our own measure of IPO success which would take these issues into account. Similarly to GH evaluation, we assessed each case in our sample based on four criteria. These values were then standardized and their mean was taken, becoming a single figure evaluation for the degree of success in every given IPO case. The four criteria for this new evaluation (hereafter “N evaluation”) are as follows:

1. Amount of capital raised resulting from selling 1% of the company to the market (“c1”).

$$c1 = \text{Net proceeds} / \frac{\text{no. of shares offered} * 100}{\text{no. of shares outstanding}}$$

First we obtain the share of the company sold in the offering in percentage format and then divide net proceeds by this number, getting a value for criterion 1. The measure shows how much capital the owners managed to get for every *single* percent of the company they sold. This eliminates the aforementioned bias towards firms selling more ownership, though still following GH in favoring companies with bigger market values.

2. Average monthly market price of the stock after 90 days of floating (effectively, the 4th month average market price), as percentage of the offer price (“c2”).

$$c2 = \frac{P_4 * 100}{P_0}$$

where P_4 is the average monthly market price of the stock on the 4th month of floatation and P_0 is the offer price.

Here we follow GH in trying to estimate the offering success through the change in market’s attitude, reflected in the market share price. However, in order to mitigate the potential problem associated with recording a single-day price, we took the monthly average after an initial period of 90 days (3 months), usually regarded as a minimal significant flotation period.

3. “c3”, and
4. “c4”,

which are both calculated with the use of the same formula as “c2”, with the exception of P_4 which is substituted by P_7 (average monthly market price of the stock on the 7th month of flotation) and P_{12} (on the 12th) respectively. These last two reflect the change in the market valuation of the IPO firms when they pass another two important flotation landmarks – 6 months and 1 year.

As noted above, the measures from “c1” to “c4” are then standardized, which is necessary since they all have different scales, giving each case of stock issuance in our sample four different “marks”. The mean of these four values gives us a final N evaluation figure.

In this paper we used two different methods of variable standardization, which are best described by formulas: $V_i st = \frac{V_i - \mu(V)}{\sigma(V)}$ (method 1) and $V_i st = \frac{V_i - MIN(V)}{MAX(V) - MIN(V)}$ (method 2), where V_i is the figure to be standardized, $\mu(V)$ is the mean of variable V, $\sigma(V)$ is its standard deviation, and $MAX(V)$ and $MIN(V)$ are its maximum and minimum values.

In order to lay ground for further discussion, we performed an analysis using both GH and N evaluations (standardization method 1), as well as GH2 and N2 evaluations (method 2). We suspect that our estimations may bear a bias associated with equal weighting of all the four factors used (which is what we do when we take the mean value), but in the absence of a well-grounded approach to scaling them differently, we have to make an assumption that the amount of capital raised for each percent of the company sold (the c1 value) is exactly as important to the issuer as the stock price level on the 4th, 7th and the 12th months of floating. Also, we observe that the use of different standardization techniques lead us to non-identical results which also points at the possibility of a bias. In order to inspect the boundaries of these issues we also perform our regression analysis using the components of the aforementioned evaluations as dependent variables, taking them individually and “as is”, without any standardization. This is done to see if, taken raw, they would fundamentally contradict the results we get after two potentially distorting transformations.

So much for the dependent variable. Since this investigation aims for determining the role of location in IPO success, as explanatory variables we use the choice of exchange – Hong Kong (HKEx), Singapore (SGX) or Malaysia (MYX). As controls, we employ the following:

- a) Variables commonly used in IPO literature as predictors of stock returns – year of IPO, underwriter quality (reputation), firm’s size, age and revenues (see Simon 1990; Logue et al, 2002; Hoberg, 2007).

- b) Variables specific to our research – controls for whether a firm is foreign to the market of its stock issuance and whether the listing took place on the main or the secondary board.

Some of these variables are self-explanatory, whereas others require some elaboration. Following Simon (1990), when investigating the role of underwriters we only considered *lead* underwriters, stated as such on the cover (or in “important” section) of IPO prospectuses. Having faced the problem of determining underwriter quality, we turned to previous works and found several competing approaches. The most widely used measure for underwriter prominence is the Carter-Manaster ranking (CM), which assigns greater prestige to underwriters listed higher on the tombstone announcements issued from 1979 to 1983 in the US (Carter and Manaster, 1990). The ranking was later updated by Carter, Dark and Singh (1998) and Loughran and Ritter (2004), and only deals with the US underwriters. However many listings in our sample were underwritten by local underwriters that never appeared in CM, thus making the method unsuitable for our purposes. Another approach is the one by Simon (1990), Megginson and Weiss (1990), who compute the dollar amount of net proceeds raised in all the stock issuances underwritten by a certain bank. The bank’s quality then is the ratio of this sum to the total net proceeds of all firms in the sample, effectively being an investment bank’s *market share* (MW)¹. It shall be noted that Megginson and Weiss report a high degree of positive correlation between the widely cited CM and their measure when used on a sample of US firms. For these reasons we employ MW as our underwriter quality measure.

Several more notes on its implementation are in order. In cases where there were more than one lead underwriter, we divided net proceeds from the offering by their number and credited each for this amount. If two investment banks merged inside the research timeframe we combined their figures. Having computed market shares of all underwriters who managed or co-managed one or more IPOs in our sample, we then assigned each listing case an underwriter quality index corresponding to market share of the most prominent underwriter taking part in that IPO. Thus, an offering, jointly underwritten by JP Morgan (market share 7.074%), CIMB (2.137%) and Standard Chartered Bank (0.66%) will get an underwriter quality index of 7.074. The complete ranking is available in Appendix I.

We used the number of employees at latest predictable date, as stated on the preliminary prospectus, as proxy for the firm’s size. Age was taken in years, and revenues were logged in as reported earnings per share (EPS), adjusted for the issuance of new shares.

¹ Megginson and Weiss (1990) make an argument that this approach is better suited for analytical purposes since it produces cardinal rather than ordinal numbers.

In order to gauge the change of slope on “foreign” coefficient in different location subsamples within our data, we also employ interaction effect variables. (E.g. $\beta_{Foreign*MYX}$, equal to 1 if the company *both* goes public in Malaysia and originates from another country, and 0 otherwise). This will be further detailed in the models and coefficients section.

Thus, our regression takes the following form:

$$y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k + \varepsilon_i,$$

where variable y , depending on the model, is an N(2) evaluation, GH(2) evaluation or one of their components, β_0 is the intercept, β_1 is the coefficient for location factor, β_2 through β_k are coefficients for the set of control variables described above, and ε_i is the error term.

Having obtained the coefficients, we then proceed to hypothesis testing. The general question asked in the Introduction section of this paper is “does location matter?”, and in order to answer it we will have to find out whether the coefficients on variables related to locations are significantly different from zero.

With HKEx used as benchmark location, our null hypothesis would be that an estimation $y = \beta_0 + \beta_{MYX}x_1 + \beta_{SGX}x_2 + \dots + \beta_kx_k + \varepsilon_r$, where either x_1 or x_2 take the value of 1 (let us call it y_1), would yield results which will not be significantly different from a case where both of them take the value of 0 (y_2). In other words, the fact that an IPO happened in a location other than Hong Kong does not significantly affect the predicted degree of IPO success. The alternative, therefore, will be that at least one of these two, if realized, will have a notable effect on the dependent variable.

To test this hypothesis, we have to subtract y_2 from y_1 and equate the result to zero, which is the mathematical representation of an assumption that they yield identical results. E.g.

$$H_0: (\beta_0 + \beta_{SGX} * 1 + \beta_2x_2 + \beta_kx_k + \varepsilon_r) - (\beta_0 + \beta_{SGX} * 0 + \beta_2x_2 + \beta_kx_k + \varepsilon_r) = 0, \text{ i.e.}$$

$$H_0: \beta_{SGX} = 0$$

The alternative hypothesis is thus:

$$H_1: \beta_{SGX} \neq 0$$

Finally, we perform an F-test for the significance of the coefficient(s) remaining after subtraction, determining how likely it is to observe the obtained results if the coefficient was, in fact, zero.

Table I below shows the complete list of the questions we ask in this paper and the underlying hypothesis sets we are going to test.

Table I
Questions and hypothesis sets

N.	Question	Hypotheses
I.	Does a local listing in Malaysia perform significantly different from a local listing in Hong Kong?	$H_0: \beta_{MYX} = 0$ $H_1: \beta_{MYX} \neq 0$
II.	Does a foreign listing in Malaysia perform significantly different from a foreign listing in Hong Kong?	$H_0: \beta_{MYX} + \beta_{Foreign*MYX} = 0$ $H_1: \beta_{MYX} + \beta_{Foreign*MYX} \neq 0$
III.	Does a local listing in Singapore perform significantly different from a local listing in Hong Kong?	$H_0: \beta_{SGX} = 0$ $H_1: \beta_{SGX} \neq 0$
IV.	Does a foreign listing in Singapore perform significantly different from a foreign listing in Hong Kong?	$H_0: \beta_{SGX} + \beta_{Foreign*SGX} = 0$ $H_1: \beta_{SGX} + \beta_{Foreign*SGX} \neq 0$
V.	Does a local listing in Malaysia perform significantly different from a local listing in Singapore?	$H_0: \beta_{MYX} = \beta_{SGX}$ $H_1: \beta_{MYX} \neq \beta_{SGX}$
VI.	Does a foreign listing in Malaysia perform significantly different from a foreign listing in Singapore?	$H_0: \beta_{MYX} + \beta_{Foreign*MYX} = \beta_{SGX} + \beta_{Foreign*SGX}$ $H_1: \beta_{MYX} + \beta_{Foreign*MYX} \neq \beta_{SGX} + \beta_{Foreign*SGX}$

3. Data description

Our final sample consists of 511 IPO firms that went public in 2009-2013 on both main and secondary boards of three different stock exchanges: HKEx (Hong Kong), SGX (Singapore) and MYX (Malaysia). We decided to put our research in 2009-2013 timeframe since it allows us to both use the freshest and the most relevant data and, with 2008 financial crisis left behind, to observe IPO performance in a more homogeneous macroeconomic environment of post-crisis market recovery.

The three exchanges of interest were chosen based on their popularity as Southeast Asia's IPO destinations and the required data availability. Another important criterion was the absence of prohibiting regulatory barriers for the foreign issuers to enter the market, as this paper aims for providing a tool for deciding on a place of listing.

Initially we took note of all companies that according to the three exchanges' website databases had their shares listed during the period of interest. Following the common practice for an IPO-related investigation (Corwin and Schultz, 2005; Dong et al, 2011), we excluded REITs,

Data description

exchange-traded funds and companies with multiple classes of stock; we then proceeded to eliminate all cases where the listing took place in forms other than initial public offering, e.g. introduction, open offer, secondary placement etc. We have also written off those cases where the listing company went bankrupt and/or were delisted in less than one year after the offering, since we would not be able to assess the IPO performance according to the selected approach. We believe that no non-negligible survivorship bias was thus introduced to the sample as there were only 7 such companies. Thus, we believe our sample size to have closely approached the size of the whole population of non-trust type single share class IPO companies that went public in Hong Kong, Singapore and Malaysia in the designated timeframe of 2009-2013.

The bigger part of the required data was obtained from the preliminary IPO prospectuses, publicly available on websites of the exchanges of interest. However, in cases where we could not find a certain figure in a prospectus we turned to other documents by the stock issuer, such as financial reports and letters to shareholders. This is especially true for “adjusted EPS” values, used as measure of a firm’s profitability – often a company would only present the basic EPS in its prospectuses or omit it altogether.

Apart from that, we used Thomson Reuters Datastream to get the stock price data. A detailed variable-by-variable description of our dataset along with our decision rules for data collection in difficult cases may be found in Appendix II.

Net proceeds, offer prices, EPS and stock price data reported in currencies other than Hong Kong Dollars (most notably, SGD, MYR and USD) was converted into HKD using the average exchange rates of the IPO year. All data was then modified to control for price change, ultimately expressing all of these values in 2010 HKD.²

Summary statistics of our sample are presented in the table below.

Table II
Summary Statistics

The table provides descriptive statistics for the data we used in this research. Panel A presents the distribution of our observations across years, exchanges and main/secondary boards, Panel B shows IPO characteristics for the whole sample and Panel C compares the averages for the most important variables across our three locations.

² Hong Kong Census and Statistics department uses 2010 as base year for CPI calculation.

Degree papers are in the "[Xiamen University Electronic Theses and Dissertations Database](#)". Full texts are available in the following ways:

1. If your library is a CALIS member libraries, please log on <http://etd.calis.edu.cn/> and submit requests online, or consult the interlibrary loan department in your library.
2. For users of non-CALIS member libraries, please mail to etd@xmu.edu.cn for delivery details.

廈門大學博碩士論文摘要庫